

Abstracts

Thursday, May 1

Session M7: Making it Clear for the Public: Techniques in Data Communication, Part 2

3:30 – 5:00 pm | Room 231

Talk to Me: Generating Interest in Water Quality through Better Reporting

Sara Steiner

New Hampshire Dept. of Environmental Services, Concord, N.H.

Abstract

The New Hampshire Volunteer Lake Assessment Program (VLAP) has monitored lake water quality since 1985 through the use of trained volunteers. These citizen scientists collect data at approximately 175 lakes and 500 river/stream stations, generating over 13,000 data points annually. The NH Department of Environmental Services utilizes the data in federal 305(b)/303(d) reporting, TMDL development, Watershed Management Plans, and to provide an overall assessment of lake health. VLAP utilizes the data to generate annual and regional reports provided to participating lake groups summarizing lake health, water quality, and recommending actions to address potential pollution concerns. Through 2010, each participating group received a comprehensive annual report consisting of approximately 50 pages of various graphics, statistical analyses, data interpretation, observations and recommendations for future monitoring activities. Although comprehensive and informative, the message was not always reaching the audience. Working with a group of volunteer monitors, the reporting process was critiqued and new reports were developed. In 2012, comprehensive two-page reports were published for each lake providing water quality data, detailed graphics, trend analysis, observations and recommendations, plus detailed water body report cards, watershed and land use maps. Specific report sections are automatically generated and anticipated to shave weeks off of the old reporting process. These individual lake reports better inform lake associations, watershed residents, visitors, towns, conservation commissions, and even realtors about the overall health of the lake and efforts being made to maintain water quality. They are easily distributed, displayed and published on-line and are already sparking conversation, concern, interest and action to protect lake water quality.

Calculating Water Quality Indicator Scores for Ecosystem Health Report Cards

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Abstract

Ecosystem health report cards can be a tool to communicate the status of and progress toward achieving water quality management objectives. They synthesize large amounts of information into public friendly communication products, which inform the general public, decision makers, and managers on current ecosystem health. Report cards use quantitatively robust data that link directly to management objectives. Management objectives are reflected in several aspects of the report card process, including indicator selection and the thresholds against which those indicators are scored, *e.g.*, do you want your river or stream to meet water quality criteria set through the Clean Water Act? Do you want the river to be swimmable (meet regulatory bacteria standards) and fishable (meet contaminant guidelines)? Two examples, from southwest Florida and the Mississippi River Basin, will be used to illustrate data analysis techniques for ecosystem health report cards. Both examples use straight forward and transparent data analysis methods so that stakeholders have a clear understanding of how report card scores are determined. Both examples also reflect the water quality management objectives of the agencies, partners, and stakeholders for their geographic location. In the Florida example (Rookery Bay National Estuarine Research Reserve), management objectives focus on maintaining good water quality to support healthy flora and fauna and

mitigating the impacts of altered freshwater inflow on biota. For the Mississippi River Basin example (America's Watershed Initiative report card), management objectives focus on six goals, which address ecosystem health and water supply and quantity, but also goals related to flood risk, economics, recreation, and transportation.

Volunteer Stream Monitoring Data for Everyone: Making Information Publicly Accessible to the Community

Julie Powers

Mid-Michigan Environmental Action Council, East Lansing, Mich.

Abstract

The Mid-Michigan Environmental Action Council conducts benthic macroinvertebrate sampling in the Red Cedar River Watershed which is a sub-watershed of the Grand River Watershed, Michigan's longest river and second largest watershed. Publicly available data for local watersheds and waterways is generally presented in static tabulated formats where comprehension and retention is low. Translating this data into relevant and persuasive data requires the addition of a visual, geospatial dimension and community engagement strategy through an annual report, online mapping and stakeholder presentations to community leaders about the monitoring process in order to address the variance in learning styles (kinetic, visual, auditory).

Balancing innovation and traditional communications techniques, Mid-MEAC developed an interactive annual report, an online presentation of findings and a series of community workshops and educational materials about the Red Cedar Watershed as well as some relevant data for the Grand River. Building upon these efforts, MiCorps data was moved to the Google Fusion Table platform and made available to watershed residents as a Google Web Map. This facilitated comprehension of the geospatial relationships between monitoring sites and land use along with stream quality scores over time.

In October 2012, Mid-MEAC, along with a team of community leaders, was able to use this process to inform the charrette planning for regional economic development in order to ensure that the needs of the entire community and the adjoining watersheds.

Where Are Our Wetlands and How Are They Doing?

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Abstract

The California Water Quality Monitoring Council recently released a completely redesigned internet portal to connect decision makers and the public with water quality and ecosystem health information. The theme of this new portal is "Are Our Wetland Ecosystems Healthy?" The new portal is accessed from California's "My Water Quality" website (www.MyWaterQuality.ca.gov) under "Are Our Aquatic Ecosystems Healthy?" The new California Wetlands Portal includes interactive graphics, maps and monitoring data that focus on the location, extent and health of the state's wetland resources. A novel home page photo carousel provides insight into the many types of wetlands found in our state. The goal is to make this information as timely and user-friendly as possible. Data presented in the portal are housed in another new web-based tool called EcoAtlas (www.ecoatlas.org). Targeted toward wetland practitioners, EcoAtlas provides an online resource for compiling maps and data about wetlands produced by numerous local, state and federal agencies and non-governmental organizations.

Formed in 2007 through cooperative agreement between California's environmental protection and natural resources agencies, the California Water Quality Monitoring Council brings together water quality and ecosystem health information from a variety of organizations with special expertise in wetland monitoring and assessment, coordinated through the California Wetland Monitoring Workgroup. This collaborative workgroup facilitates dialogue and coordination among twenty-three state, federal, and local agencies and non-governmental organizations that monitor and assess our state's wetlands. Their new portal provides a way to make the information collected as part of this monitoring investment more readily accessible so that it can inform policies and management decisions. Furthermore, it allows the general public to access information about local and statewide resources that were compiled by public agencies with public resources.

In 2009, the Monitoring Council released its first two internet portals, "Is it Safe to Swim in Our Waters?" and "Is it Safe to Eat Fish and Shellfish from Our Waters?" In 2010, the first California Wetlands Portal was added and in 2012 the Healthy Streams Portal was launched. Additional portals will highlight California's estuaries, ocean and coastal waters, and drinking water resources.